

CLAIMS

1. A receptacle (1) comprising an outer cup (2), an inner cup (3) nested within the outer cup, an ingredient chamber (11) located between the nested cups, and one or more ports (12,13) formed in the inner cup (3) to permit flow
5 of liquid between the inner cup and the ingredient chamber, characterised in that the nested cups (2,3) are coupled together by interengaging means (17,23) which constrains the cups to move relatively to one another with a screw motion, whereby, in response to relative twisting of the cups, the cups are axially movable relatively to one another so as to exert a squeezing
10 action on an ingredient in the ingredient chamber (11) to assist in mixing or infusing the ingredient with a liquid contained in the receptacle.
2. A receptacle as claimed in claim 1, wherein the ingredient chamber (11) is defined by mutually opposed bottom walls (4,5) of the outer and inner cups (2,3).
- 15 3. A receptacle as claimed in claim 1 or 2, wherein each of the outer and inner cups (2,3) comprises an upstanding sidewall (6,7) inclined generally outwardly towards a mouth (8) of the receptacle, for example, at angle of approximately 4° with respect to the axis of the receptacle.
4. A receptacle as claimed in claims 2 and 3, wherein the inner and outer
20 cups (2,3) are designed so that when the cups are relatively twisted to move the inner cup to a fully closed or nested position within the outer cup, the inner cup is a tight fit within the outer cup whilst defining an ingredient chamber (11) of reduced depth between the bottom walls (4,5) of the cups.
5. A receptacle as claimed in claim 2, 3 or 4, wherein at least one port
25 (12) for permitting flow of liquid between the ingredient chamber (11) and the inner cup (3) is formed in the bottom wall (5) of the inner cup.
6. A receptacle as claimed in claim 5, wherein said at least one port comprises a plurality of perforations or small holes (12) in the bottom wall (5) of the inner cup.
- 30 7. A receptacle as claimed in any one of the preceding claims, wherein at least one port (13) for permitting flow of liquid between the ingredient

chamber (11) and the inner cup (3) is formed in the sidewall (7) of the inner cup.

8. A receptacle as claimed in claim 7, wherein the or each port in the sidewall (7) of the inner cup (3) comprise a slot (13) extending upwardly of the sidewall from its bottom wall (5) and/or holes formed in the sidewall (7) of the inner cup.

9. A receptacle as claimed in any one of the preceding claims, wherein the interengaging means (17,23) coupling the cups (2,3) together is formed on substantially cylindrical collars (9,10) associated with the sidewalls (6,7) of the cups.

10. A receptacle as claimed in claim 9, wherein the interengaging means comprises one or more protuberances (23) on the collar (10) of one of the cups (3) slidably engaged in one or more grooves (17) formed in the collar (9) of the other cup (2), the or each groove (17) being inclined to the axis of the receptacle (1) so as to produce the desired screw motion when the cups (2,3) are relatively twisted.

11. A receptacle as claimed in claim 10, wherein the protuberances (23) are formed on the outside of the collar (10) of the inner cup (3) and the cooperating grooves (17) are formed on the inside of the collar (9) of the outer cup (2).

12. A receptacle as claimed in claim 10 or 11, wherein the upper end of the or each groove (17) terminates in abutment means (18) so that the cooperating protuberance (23) is a snap-fit into the upper end of the groove, whereby to retain the inner cup in nested relation with the outer cup and define the maximum height of the ingredient chamber (11).

13. A receptacle as claimed in claim 10, 11 or 12, wherein the upper and lower ends of the or each groove (17) are formed with means (19a,19b) for engaging the cooperating protuberances (23) so as to index the inner cup (3) in its fully open and fully nested position.

14. A receptacle as claimed in any one of the preceding claims, wherein the interengaging means (17,23) is adapted to permit the inner and outer cups (2,3) to twist relatively to one another through approximately 45° in order to screw the inner cup from its fully open to its fully nested position.
- 5 15. A receptacle as claimed in any one of the preceding claims 9 to 14, wherein the substantially cylindrical collars (9,10) of the interengaging means (17,22) are disposed at the upper ends of the sidewalls (6,7) of the outer and inner cups.
- 10 16. A receptacle as claimed in any one of the preceding claims, wherein the inner cup (3) has a rim flange (24) depending from the rim (22) of the cup about the outside of the outer cup (2), whereby to conceal the rim (16) or the rim and collar (9) of the outer cup.
- 15 17. A receptacle as claimed in any one of the preceding claims, wherein the sidewall (6) of the outer cup (2) is formed externally with an array of axially extending ribs (20) which facilitate gripping of the container by a consumer.
18. A receptacle as claimed in claim 17, wherein the outer cup (2) has a plane area below the ribs (20) for enabling printing, embossing or other form of decoration or advertisement.
- 20 19. A receptacle as claimed in any one of the preceding claims, wherein the outer cup (2) or the outer cup and the inner cup (3) are transparent or translucent.
20. A receptacle as claimed in any one of the preceding claims, wherein the outer and inner cups (2,3) are injection moulded from plastics material.
- 25 21. A receptacle as claimed in any one of the preceding claims, including stacking shoulders (25) formed on the inside of the sidewall (7) of the inner cup (3) which are engageable with the bottom wall (4) of an outer cup (2) when a multiplicity of receptacles (1) are stacked in nested relation to prevent the receptacles jamming or wedging together when restacked.

22. A receptacle as claimed in any one of the preceding claims, including an ingredient disposed in the ingredient chamber (11).

23. A method of preparing a liquid product in a receptacle (1) comprising an inner cup (3) nested within an outer cup (2) and defining an ingredient chamber (11) between mutually opposed bottom walls (4,5) of the nested cups, an ingredient disposed in the ingredient chamber (11), and one or more ports (12,13) formed in the inner cup (3) to permit flow of liquid between the ingredient chamber and the inner cup, characterised by the steps of adding to the inner cup (3) liquid for producing the liquid product, twisting the cups (2,3) relatively to one another, and constraining the cups to move relative to one another with a screw motion in response to twisting such that the cups also move axially relatively to one another and the bottom walls (4,5) of the cups exert a squeezing action on the ingredient in the ingredient chamber (11), thereby to assist in mixing or infusing the ingredient with the liquid contained in the receptacle.

24. A method as claimed in claim 23, wherein at least one port (12) for permitting flow of liquid between the ingredient chamber (11) and the inner cup (3) is disposed in the bottom wall (5) of the inner cup and, when desired infusion or mixing has been achieved, the cups (2,3) are screwed together so as to move the inner cup (3) to its fully nested position within the outer cup (2) and thereby effectively shut off the port(s) (12) by engagement with compressed ingredient in the ingredient chamber.

25. A method as claimed in claim 23 or 24, wherein at least one port (13) is disposed in the sidewall (7) of the inner cup (3) and is shut off by tight engagement with the sidewall (6) of the outer cup (2) when the cups (2,3) are screwed together so as to move the inner cup (3) to its fully nested position within the outer cup (2).